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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,363	10/14/2003	Joseph Tak Ming Kwok	A-76718/DNM	6709

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EXAMINER	
NGUYEN, THANH NHAN P	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,363	KWOK, JOSEPH TAK MING	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P. Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This communication is responsive to Amendment dated 3/13/2006.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arikawa et al (US 6,147,934).

Regarding claim 1, Arikawa et al discloses in figure 1, in a liquid crystal display apparatus having a liquid crystal assembly including:

- liquid crystal material (L) sandwiched between a pair of transparent plates (13a, 13b) which carry patterned electrodes (not shown) which provide the desired liquid crystal display segments
- front (11) and rear polarizing layers (12) having transmission axes aligned or rotated with respect to each other
- a reflector (18a) for reflecting ambient incident light on said front layer back through said rear polarizing layer and said liquid crystal assembly and said front polarizing layer to a viewer the improvement comprising
- a layer (not shown) including fluorescent material [see col. 5, lines 10-16] between said rear polarizing layer and said reflector (18a) responsive to said

ambient incident light to emit a specific wavelength to provide a specific color in said negative operating mode for said display segments

Even though Arikawa et al does not disclose the apparatus having both positive and negative modes, it was well known in the art to have the image displaying as black on white or white on black, and these two modes, by fact, recognized equivalent. Therefore, it does not patentably distinguish the invention.

Further, according to the display device of Arikawa et al, the pattern (20), which could be a logo, a mark, a character or the like, [Abstract], would be shown in the display in either negative mode or in positive mode. In another words, the pattern (20) would be always appeared under either operating mode. And therefore, it is obvious that the pattern (20) showed in negative operating mode, and it is met the last limitation in claim 1.

Regarding claim 4, limitation "fluorescent layer is printed on said reflector" makes the claim become product-by-process claim, [see MPEP 2113], and the process limitation does not effect the structure of the device. Therefore, claim 4 is examined as the product claim itself, and it is met the rejection as in claim 1.

Regarding claim 6, Arikawa et al discloses in figure 1, where said rear polarizing layer (12) is a reflective polarizer film.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arikawa et al in view of Flynn (US 5,815,228).

Regarding claim 2, even though Arikawa et al lacks disclosure of fluorescent layer also includes phosphorescent material, it was well known in the art to use

phosphorescent material for emitting light at a predetermined intensity and frequency for a predetermined period after the light source is off, as evidenced by Flynn, [see col. 5, lines 24-27]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have fluorescent layer also includes phosphorescent material for emitting light at a predetermined intensity and frequency for a predetermined period after the light source is off.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arikawa et al in view of Noble (US 4,521,775).

Regarding claim 3, Arikawa et al lacks disclosure of in a display apparatus as in claim 1 including a multiplexing driver for driving said patterned electrodes with a duty cycle of at least 1/2.

Noble discloses the multiplexing driver for driving patterned electrodes with a duty cycle of at least ½ for the benefit of maintaining reliability while obtaining satisfactory contrast ratios, [see col. 1, lines 37-42]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use multiplexing driver for driving patterned electrodes with a duty cycle of at least ½ for the benefit of maintaining reliability while obtaining satisfactory contrast ratios.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arikawa et al in view of Ouderkirk et al (US 6,124,971).

Regarding claim 5, Arikawa et al lacks disclosure of the reflector composed of translucent material.

It was well known that the reflector composed of translucent material would function as a transflective optical layer (or transflector) to utilize the ambient light (in reflective mode) or backlight (in transmissive mode) for the benefit of increasing efficiency and brightness in liquid crystal display device, as evidenced by Ouderkirk, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the reflector composed of translucent material for the benefit of increasing efficiency and brightness under both ambient and supplemental lighting conditions in visual display applications.

Response to Arguments

Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen
Examiner
Art Unit 2871

TN

ANDREW SCHECHTER
PRIMARY EXAMINER